

INITIAL REVIEW ENGINEERING REPORT  
PMN: 18-0169

Focus Ready Draft 7/19/2018

ENGINEER: Al-Haddad \ JAS

PV (kg/yr):

SUBMITTER: C. L. Hawthaway & Sons Corp.

Acrylate FGEW =

S:

MSDS: Yes

Label: No

Gen Eqpt: Permeation resistant gloves, Butyl rubber gloves, Nitrile rubber gloves, Neoprene gloves // Chemical safety goggles or safety glasses with side-shields. //

Respirator: Use a properly fitted, air-purifying or air fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and safe working limits of the known respirator.

Health Effects: Harmful if swallowed. Causes skin irritation. May cause an allergic skin reaction| Causes serious eye irritation. May cause respiratory irritation. May damage the unborn child. Harmful to aquatic life with long lasting effects.

TLV/PEL:

none established.

CRSS (07/09/2018):

[REDACTED]  
[REDACTED]  
[REDACTED]  
S-H2O: Dispersible g/L @

VP: 1.0E-6 torr @

MW: 10000.00 0.50%<500 0.50%<1000

Physical State and Misc CRSS Info:

Neat: Solid (est) Mfg: Solution: 35.75% in [REDACTED] dispersion Proc/Form:

NA End Use: Destroyed. The structure d

[REDACTED] with IR spectrum provided; [REDACTED]  
[REDACTED].

NAVG MW = 10,000 with 0.5% <500 and 0.5% <1000 by GPC.

Submitted data: Density = 1.06 g/cc, pH = 8. The MSDS states that the PMN substance is dispersible in water.

Estimated data:

Acrylate FGEW = [REDACTED].

The molecular weight as drqwn on page 1 of this report is [REDACTED] g/mole.

Consumer Use: No

SAT (concerns) (07/10/2018):

Related Cases and Misc SAT Info:

Analogs: [REDACTED].

Migration to groundwater: Negligible

PBT rating: P3B1T2

Health: 2 Dermal, Drinking Water, Inhalation, Other

Eco: 1 No releases to water

OCCUPATIONAL EXPOSURE RATING: [REDACTED]

NOTES & KEY ASSUMPTIONS:

Occupational exposure and environmental releases were estimated using the 9/30/2013 version of ChemSTEER tool. Input to ChemSTEER tool includes information from: the PMN submission, physical / chemical properties, and information from the technical contact (see contact report). The SAT report lists concern for dermal, drinking water, and inhalation exposures. Migration to gw is negl. // No same-submitter, similar use past cases were found. // The following sam[REDACTED]er, [REDACTED] are referenced for consistency: [REDACTED] // MFG: This IRER assesses releases from [REDACTED] to incinera[REDACTED] water per submission information. (consistent with [REDACTED]) It als[REDACTED]sses dermal exposures from loading product [REDACTED] This IRER assesses releases f[REDACTED] to uncertain media and from [REDACTED] to air, water, and landfill [REDACTED] nt with all past cases). It also [REDACTED] exposure from [REDACTED] and inhalation exposure from [REDACTED] (consistent with all past cases).

POLLUTION PREVENTION CONSIDERATIONS:

None.

EXPOSURE-BASED REVIEW: [REDACTED]

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Manufacturing: [REDACTED]

Number of Sites/ Location: 1

C.L. HAUTHAWAY & SONS CORP. Lynn MA 01905

Days/yr: 4

Basis: Per submission, 1 site, [REDACTED] kg/batch, [REDACTED] hr/batch, [REDACTED] batches/yr.

[REDACTED]

ENVIRONMENTAL RELEASES ESTIMATE SUMMARY

IRER Note: The daily releases listed for any source below may coincide with daily releases from the other sources to the same medium.

Water

Conservative: [REDACTED] kg/site-day over [REDACTED] days/yr from 1 site  
or [REDACTED] kg/site-yr from 1 site or [REDACTED] kg/yr-all sites  
to: POTW (Lynn wastewater treatment plan MA100522) (per submission)

from: [REDACTED]  
basis: [REDACTED]  
The submission estimates [REDACTED] kg/ [REDACTED] ter  
[REDACTED] from [REDACTED]  
[REDACTED], per technical contact). As a conservative  
estimate, RAD assesses 1% residual to POTW.

Incinerati

Output 2: [REDACTED] kg/site-day over [REDACTED] days/yr from 1 site  
or [REDACTED] kg/site-yr from 1 site or [REDACTED] kg/yr-all sites  
to: off-site incineration (per submission)  
from: [REDACTED]  
basis: User-Defined Loss Rate Model. The submission e  
[REDACTED] ion from [REDACTED]  
[REDACTED], per technical contact).  
This is assessed as more conservative than the RAD standard 1% estimate.

E TOTAL

[REDACTED] kg/yr - all sites

#### OCCUPATIONAL EXPOSURES ESTIMATE SUMMARY

Tot. # of workers exposed via assessed routes: 12

Basis:

Inhalation:

negligible ( $VP < 0.001$  torr). Generation of mists/aerosols/particulates not expected from MFG process.

Dermal:

Exposure to Liquid at 35.75% concentration

High End:

- > Potential Dose Rate: [REDACTED] mg/day over [REDACTED] days/yr
- > Lifetime Average Daily Dose: [REDACTED] mg/day over [REDACTED] days/yr
- > Average Daily Dose: [REDACTED] mg/day over [REDACTED] days/yr
- > Acute Potential Dose: [REDACTED] mg/day over [REDACTED] days/yr

Number of workers (all sites) with dermal exposure: 6

Basis: Loading Liquid Product into Drums; EPA/OPPT 2-Hand Dermal Contact with Liquids Model. Per November 2016 RAD guidance, default parameters for this model were updated: body weight (BW) was updated from 70 to 80 kg and Averaging Time over a Lifetime (ATc) was updated from 70 to 78 years.

Exposure to Liquid at 100.00% concentration

High End:

- > Potential Dose Rate: [REDACTED] mg/day over [REDACTED] days/yr
- > Lifetime Average Daily Dose: [REDACTED] mg/day over [REDACTED] days/yr
- > Average Daily Dose: [REDACTED] mg/day over [REDACTED] days/yr
- > Acute Potential Dose: [REDACTED] mg/day over [REDACTED] days/yr

Number of workers (all sites) with dermal exposure: 6

Basis: Sampling Liquid Product; EPA/OPPT 1-Hand Dermal Contact with Liquids Model. Per November 2016 RAD guidance, default parameters for this model were updated: body weight (BW) was updated from 70 to 80 kg and Averaging Time over a Lifetime (ATc) was updated from 70 to 78 years.

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Use: Protective Coating

Number of Sites/ Location: ■

unknown site(s)

Days/yr: 250

Basis: The submission did not provide information on end use. The technical contact estimates up to ■ potential customer use site RAD assumes up to 250 days/yr. CS calculates ■ kg PMN/site-day (■ kg coating/site-day).

ENVIRONMENTAL RELEASES ESTIMATE SUMMARY

IRER Note: The daily releases listed for any source below may coincide with daily releases from the other sources to the same medium.



Water

Output 2: [REDACTED] kg/site-day over 250 days/yr from [REDACTED] sites  
or [REDACTED] kg/site-yr from [REDACTED] sites or [REDACTED] kg/yr-all sites  
to: water (9.6%), air (4%), landfill (86.4%) (per model)  
from: [REDACTED]

[REDACTED] Because of the uncertainty in the [REDACTED] application,  
RAD [REDACTED] els to estimate releases from [REDACTED]. RAD uses  
the [REDACTED] model as conservative because it assumes the use  
of [REDACTED] (and subsequent releases to water) (drinking water  
exposures are a concern).

Water or I [REDACTED] ation or Landfill

High End: [REDACTED] kg/site-day over [REDACTED] days/yr from [REDACTED] sites  
or [REDACTED] kg/site-yr from [REDACTED] sites or [REDACTED] kg/yr-all sites  
to: uncertain  
[REDACTED]  
[REDACTED]

basis: [REDACTED]. No  
information provided in the submission. Because of uncertainty at  
unknown, non-submitter controlled sites, RAD assesses release using  
standard model to uncertain media.

Water or Incin [REDACTED] n or Landfill

Conservative: [REDACTED] kg/site-day over 250 days/yr from [REDACTED] sites  
or [REDACTED] kg/site-yr from [REDACTED] sites or [REDACTED] kg/yr-all sites  
to: uncertain  
from: [REDACTED]

basis: [REDACTED]  
No information provided in the submission. Because of uncertainty at  
unknown, non-submitter controlled sites, RAD assesses release using  
standard model to uncertain media.

Air

Output 2: [REDACTED] kg/site-day over 250 days/yr from [REDACTED] sites  
or [REDACTED] kg/site-yr from [REDACTED] sites or [REDACTED] kg/yr-all sites  
to: water (9.6%), air (4%), landfill (86.4%) (per model)  
from: [REDACTED]

[REDACTED] Because of the uncertainty in the [REDACTED] application,  
RAD [REDACTED] els to estimate releases from [REDACTED]. RAD uses  
the [REDACTED] model as conservative because it assumes the use  
of [REDACTED] (and subsequent releases to water) (drinking water  
exposures are a concern).

Landfill

Output 2: [REDACTED] kg/site-day over 250 days/yr from [REDACTED] sites  
or [REDACTED] kg/site-yr from [REDACTED] sites or [REDACTED] kg/yr-all sites  
to: water (9.6%), air (4%), landfill (86.4%) (per model)  
from: [REDACTED]

[REDACTED] Because of the uncertainty in the [REDACTED] plication,  
RAD [REDACTED] els to estimate releases from [REDACTED]. RAD uses  
the [REDACTED] model as conservative because it assumes the use  
of [REDACTED] (and subsequent releases to water) (drinking water  
exposures are a concern).

E TOTAL  
[REDACTED] kg/yr - all sites

#### OCCUPATIONAL EXPOSURES ESTIMATE SUMMARY

Tot. # of workers exposed via assessed routes: [REDACTED]  
Basis:

Inhalation:

Exposure to Mist (non-volatile) (Class I)

Upper Bound:

- > Potential Dose Rate: [REDACTED] mg/day over 250 days/yr
- > Lifetime Average Daily Dose: [REDACTED] mg/kg-day over 250 days/yr
- > Average Daily Dose: [REDACTED] mg/day over 250 days/yr
- > Acute Potential Dose: [REDACTED] mg/day over 250 days/yr

Number of workers (all sites) with inhalation exposure: [REDACTED]

Basis: [REDACTED]; OSHA PNOR PEL-Limiting Model. Per November 2016 RAD guidance, default parameters for this model were updated: body weight (BW) was updated from 70 to 80 kg and Averaging Time over a Lifetime (ATc) was updated from 70 to 78 years. Cm = 5.4 mg/m3 over 8 hr/day.

NOTE: The respirator class is: I. Particulate (including solid or liquid droplets).

INHALATION MONITORING DATA REVIEW

- 1) Uncertainty (estimate based on model, regulatory limit, or data not specific to industry): Yes
  - 2)a) Exposure level > 1 mg/day? [REDACTED]  
OR  
b) Hazard Rating for health of 2 or greater? 2 Yes
- => Inhalation Monitoring Data Desired? **No**

Dermal:

Exposure to Liquid at 35.75% concentration

High End:

- > Potential Dose Rate: [REDACTED] mg/day over 250 days/yr
- > Lifetime Average Daily Dose: [REDACTED] mg/day over 250 days/yr
- > Average Daily Dose: [REDACTED] mg/day over 250 days/yr
- > Acute Potential Dose: [REDACTED] mg/day over 250 days/yr

Number of workers (all sites) with dermal exposure: [REDACTED]

Basis: [REDACTED]; EPA/OPPT 2-Hand Dermal Contact with Liquids Model. Per November 2016 RAD guidance, default parameters for this model were updated: body weight (BW) was updated from 70 to 80 kg and Averaging Time over a Lifetime (ATc) was updated from 70 to 78 years.

